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EXAMINER

QIN, YIXING

ART UNIT PAPER NUMBER

2622

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,789

Applicant(s)

LEYVA, RICARDO OSUNA

Examiner

Yixing Qin

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>26 November 2003</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

I. Claims 7, 8, 10 and 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueda et al (EPO Patent Application No. 0,571,194).

1. Claim 7

A media-handling system comprising:

- **a printer having an output, wherein the printer output is variable among a plurality of output speeds;**
- Ueda et al discloses in column 1, lines 1-3 that their "...invention relates to a printing machine, e.g. for mimeographic printing, adapted to be connected with a sorter..." Further, in Fig. 3 and column 5, lines 58-59 disclose "...an operating panel 70 equipped with the mimeographic printing machine 30." In column 6, lines 6-7, Ueda et al discloses "...print speed set-up keys 74 for setting up a print speed..." One can see from Fig. 3, that there are two arrows for changing the speed of printing.
- **and a first accessory device having an input coupled to receive media from the output of the printer, the input of the first accessory device being**

variable among a plurality of input speeds, wherein the first accessory device is configured to match its input speed to one of the plurality of output speeds of the printer.

- Ueda discloses in column 4, lines 21- 26 that “[t]he paper discharge unit includes a belt conveyer 62...and the printed paper sheet removed from the printing drum 31 [is] conveyed toward the sorter 1...” Ueda et al also discloses in column 7, lines 16-27 that “...if the print speed data to be input by the print speed set-up keys 74 is 100 sheets/minute (100 r.p.m.), which exceeds the upper threshold, it will be substituted by 60 sheets/minute (60 r.p.m.), which is a predetermined speed.” Directly below in lines 24-27, Ueda et al discloses that the print speed need not be changed if it is 60 sheets/minute or less (i.e. **plurality of output speeds from the printer**). The sorter (item 1 in Ueda’s figures) is the **first accessory device**.
- Ueda further discloses in column 7, lines 28-34 that “[t]his predetermined speed is a speed such the printed sheets...can be sorted exactly and orderly.” This indicates that the sorter can match a printing speed of 60 sheets/minute and sort papers correctly.

2. Claim 8

A media-handling system as recited in claim 7

- **wherein the printer includes a print engine capable of communicating with the first accessory device.**

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- Ueda et al discloses in Fig. 4 the various connections between the printing machine (30) (**print engine**) and the sorter (1). Ueda et al discloses in column 6 lines 30-36 that “[a] controller 103 on the sorter side performs communications of various signals between the mimeographic printing machine 30 and the CPU 100...” One can see from Fig. 4 that the CPU 100 of the printer can communicate with the controller 103 of the sorter.

3. Claim 10

A media-handling system as recited in claim 7

- **wherein the first accessory device includes an engine capable of communicating with devices coupled to the first accessory device.**
- Ueda et al discloses in column 6, lines 30-36 that “[a] controller 103 on the sorter side performs communications of various signals between the mimeographic printing machine 30 and the CPU 100...”

4. Claim 13

A method comprising:

- **identifying a second device coupled to an output of a first device, wherein the output of the first device is variable among a plurality of output speeds;**
- The printer (item 30) in Ueda et al's invention is the first device and the sorter (item 1) is the second device.

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- Ueda et al discloses in column 1, lines 1-3 that their "...invention relates to a printing machine, e.g. for mimeographic printing, adapted to be connected with a sorter..." Further, in Fig. 3 and column 5, lines 58-59 disclose "...an operating panel 70 equipped with the mimeographic printing machine 30." In column 6, lines 6-7, Ueda et al discloses "...print speed set-up keys 74 for setting up a print speed..." One can see from Fig. 3, that there are two arrows for changing the speed of printing.
- **providing a list of the plurality of output speeds to the second device;**
- Although Ueda et al's invention does not explicitly disclose that a list of speeds are sent to the second device (in their case a sorter), it is understood that the printer can print anywhere from 0 to a maximum sheet/minute output of the printer because the print set-up keys allows so.
- **receiving from the second device a selected output speed at which the first device is to output media to the second device;**
- Ueda et al discloses in column 7, lines 19-23 that "...if the print speed data to be input by the print speed set-up keys 74 is 100 sheets/minute (100 r.p.m.), which exceeds the upper threshold, it will be substituted by 60 sheets/minute (60 r.p.m.), which is a predetermined speed."
- **and the first device outputting media to the second device at the selected output speed.**
- Ueda et al discloses in column 7, that "...the printing will be performed based on the data about the number of sheets to be printed (i.e. 60 sheets/minute)..."

5. Claim 14

A method as recited in claim 13

- **wherein the second device has a single input speed.**
- From the rejection to the third limitation of claim 13 above, the given example disclosed that there was a single predetermined (maximum) speed for the sorter. (second device). One can simply eliminate the ability of this sorter to sort at any speed less than this maximum speed to arrive at a device only capable of processing printed material at a single speed.

6. Claim 15

A method as recited in claim 14 wherein

- **the selected output speed matches the input speed of the second device.**
- Ueda et al discloses in column 7, lines 16-27 that "...if the print speed data to be input by the print speed set-up keys 74 is 100 sheets/minute (100 r.p.m.), which exceeds the upper threshold, it will be substituted by 60 sheets/minute (60 r.p.m.), which is a predetermined speed [and]...if the print speed data to be inputted by the print speed setup keys 74 is equal to or less than 60 sheets/minute, it is unnecessary to change the print speed data." This indicates that the printer in Ueda et al's invention in the given example will print at any of 60 sheet/minute or less to match the input speed of the sorter. Lines 28-34 of column 7 further describes the purpose for the limiting speed.

7. Claim 16

A method as recited in claim 13

- **wherein the second device has a plurality of input speeds.**
- From the rejection to claim 15 above, it is shown that the sorter in Ueda et al's invention in the given example can handle input speeds of 60 sheet/minute or less.

8. Claim 17

A method as recited in claim 16

- **wherein the selected output speed matches one of the plurality of input speeds of the second device.**
- As mentioned above, in the rejection to claims 15 and 16, the given example implies that any print speed (output speed from the printing mechanism) of 60 sheet/minute or less can be matched by the sorter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al (EPO Patent Application No. 0,571,194)

9. Claim 1

A media-handling system comprising:

- **a printer having an output, wherein the printer output is variable among a plurality of output speeds;**
- Ueda et al discloses in column 1, lines 1-3 that their "...invention relates to a printing machine, e.g. for mimeographic printing, adapted to be connected with a sorter..." Further, in Fig. 3 and column 5, lines 58-59 disclose "...an operating panel 70 equipped with the mimeographic printing machine 30." In column 6, lines 6-7, Ueda et al discloses "...print speed set-up keys 74 for setting up a print speed..." One can see from Fig. 3, that there are two arrows for changing the speed of printing.
- **and a first accessory device having an input coupled to receive media from the output of the printer, the input of the first accessory device having an associated input speed, wherein the first accessory device is configured to communicate the input speed to the printer.**
- Ueda et al discloses in column 7, lines 16-27 that "...if the print speed data to be input by the print speed set-up keys 74 is 100 sheets/minute (100 r.p.m.), which exceeds the upper threshold, it will be substituted by 60 sheets/minute (60 r.p.m.), which is a predetermined speed." The sorter (item 1 in Ueda's figures) is

the **first accessory device**. Ueda et al further discloses in column 7, lines 34-35 that "[t]his speed is previous stored in the ROM 101..." One can see in Fig. 4 that this ROM is a part of the printing machine 30.

- Ueda also discloses in column 6 lines 30-36 that "[a] controller 103 on the sorter side performs communications of various signals between the mimeographic printing machine 30 and the CPU 100..." Although it is not explicitly disclosed, the signals sent from the sorter to the print machine could be information regarding speed if one were to put the ROM 101 into the sorter instead of the printer. The placement of the ROM 101 in the sorter would not take away from the design of the invention as it would still be able to communicate to the CPU 100 through the use of the controller 103.
- If however, the ROM should not be moved out of the printing machine, one would understand that there has to be signals from the sorter to the printing machine (i.e. from the controller 103 to the CPU 100) to indicate to the printer that indeed a particular sorter is connected that has a printing speed of up to 60 sheets/minute. If there were no communication mechanism between the printer and the sorter and the printer printed at a rates faster than that of which the sorter can handle, a paper jam would likely occur.

10. Claim 2

A media-handling system as recited in claim 1

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- **wherein the printer has an input that is variable among a plurality of speeds.**
- As mentioned in the claim 1 rejection above, the example given by Ueda et al discloses variable print speeds. The examiner interprets this as Ueda et al's invention has variable printer output speeds.
- Ueda et al discloses in column 4, line 2 "[a] paper feed unit..." which inputs paper to be printed. Although Ueda et al does not explicitly disclose that the paper feed unit inputs the paper in a variable rate, it would be obvious that different output speeds require different paper input speeds or else jamming of paper could occur. For example, if the printer is to print 10 sheets per minute, the inputting of 50 pages per minute from the paper feed unit would cause an abundance of paper in the printer and is likely to cause the jamming of the printer.

11. Claim 3

A media-handling system as recited in claim 1

- **wherein the printer includes a print engine capable of communicating with the first accessory device.**
- Ueda et al discloses in Fig. 4 the various connections between the printing machine (30) (**print engine**) and the sorter (1). One can see from Fig. 4 that the CPU 100 of the printer can communicate with the controller 103 of the sorter. Also see the rejection to claim 8 above.

II. Claims 4-6, 9, 11, 12 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al (EPO Patent Application No. 0,571,194) in view of Fietze et al (U.S. Patent No. 6,241,404)

12. Claims 4 and 9

A media-handling system as recited in claim 1 (7)

- **wherein the printer includes a print engine capable of communicating with devices coupled to the printer.**
- The Ueda reference does not disclose the communication of the printer to more than one device attached to the printer. The secondary reference, Fietze et al discloses in Fig. 4 and 5 an OAM (output accessory manager), which as described in the second and third lines of the abstract, is part of a "...main copier and/or printer unit..." In column 5, lines 57-58, Fietze et al discloses that "...control messages [for the POPD [paper object processing device, such as those disclosed in Fig. 3]...are sent by the OAM. Also, Fietze et al discloses in Fig. 5 that the OAM communicated messages to a first POPD (paper object finishing device), and can receive messages from an nth POPD. Column 8, lines 49-56 of Fietze et al describes the job control sequence.
- Again, both references are in the art of finishing device management for a printing system. Therefore, it would have been obvious to one of ordinary skill in

the art at the time of the invention to improve Ueda's invention with the OAM and its ability to communicate to a plurality of finishing devices. The motivation would be to expand the number of finishing devices a printing device can communicate with to provide further functionality such as stapling, collating, etc.

13. Claims 5 and 11

A media-handling system as recited in claim 1 (7)

- **further including a second accessory device having an input coupled to receive media from an output of the first accessory device, the input of the second accessory device having an associated speed, wherein the second accessory device is configured to communicate the input speed to the first accessory device.**
- Although the Ueda et al reference discloses the communication of speed between the printer and the sorter, it does not disclose the communication of the printer to more than one device attached to the printer. The secondary reference, Fietze et al, discloses in Fig. 4 and 5 an OAM (output accessory manager), which as described in the second and third lines of the abstract, is part of a "...main copier and/or printer unit..." In column 5, lines 57-58, Fietze et al discloses that "...control messages [for the POPD [paper object processing device, such as those disclosed in Fig. 3]...are sent by the OAM. Also, Fietze et al discloses in Fig. 5 that the OAM communicated messages to a first POPD (paper object finishing device), and can receive messages from an nth POPD. Some of the

information that can be received are the prep_time and flow_time data in table 1 in column 9. Column 9, lines 36-37 discloses that “...the timing values...are forwarded to the next downstream device.” Although these times are not necessarily the input speed of a particular device, their goal is to enable the system to know how quickly a paper object can be processed (i.e. how long it takes to staple or stack). Column 8, lines 49-56 of Fietze et al describes the job control sequence.

- Both the Ueda et al and Fietze et al references are in the art of finishing device management for a printing system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve Ueda's invention with the OAM and its ability to communicate to a plurality of finishing devices. The motivation would be to expand the number of finishing devices a printing device can communicate with to provide further functionality such as stapling, collating, etc.

14. Claims 6 and 12

A media-handling system as recited in claim 5 (11)

- **wherein the second accessory device input is variable among a plurality of speeds.**
- Ueda et al has disclosed that the sorter in his system can operate at variable speeds (see rejection to claim 1). Again, however, Ueda et al does not disclose that a second device can have a plurality of input speeds. As mentioned above

in the rejection to claims 5 and 11, the timing values disclosed by Fietze et al can be an indication of the processing speed of a device. Furthermore, in looking at Table 1 of column 9 of Fietze, again, one can see that different times are associated with different PO (Paper Object) IDs. This is an indication that the different devices have varying processing times (or speed) for different paper objects.

- Again, both the Ueda et al and Fietze et al references are in the art of finishing device management for a printing system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve Ueda's invention with the OAM and its ability to communicate to a plurality of finishing devices and to have those devices be capable of varying processing times (or speed). The motivation would be to expand the number of finishing devices a printing device can communicate and to enable those devices to process different types of paper object jobs.

15. Claim 18

A method as recited in claim 13 further including:

- **identifying a third device coupled to an output of the second device, wherein the output of the second device is variable among a plurality of output speeds;**
- Although the Ueda et al reference discloses the connection of a printer with a sorter, it does not explicitly disclose that there is a second or a third device that

could be added to the system. The secondary reference, Fietze et al, discloses in Fig. 1 a plurality of finishing devices and in Fig. 2 examples of how they could be interconnected to a printer and each other.

- **providing a list of the plurality of second device output speeds to the third device;**
- **and receiving from the third device a second selected output speed at which the second device is to output media to the third device.**
- The Fietze et al reference addresses limitations two and three above. Fietze et al discloses in Fig. 6 the relaying of POHs (paper object headers) through a variety of processing devices. Item 70 is a bypass (column 9, line 11). Item 72 is a collator/stapler (column 9, line 12). Item 74 is a stacker (column 9, line 13)
- Table 1 in column 9 shows the prep_time and flow_time data for the various processing devices. Although these times are not necessarily the input speed of a particular device, their goal is to enable the system to know how quickly a paper object can be processed (i.e. how long it takes to staple or stack).
- Furthermore, Fietze et al discloses in column 9, lines 40-43 that “[b]ecause, as mentioned above, the first response requests additional delay, POH1.1 is sent through the route again, containing new flow time information (it is assumed that one frame is equal to 500 milliseconds). This gives each POPD the opportunity to update its time table.” By running the POH1.1 through the all the POPDs again, each device is able to get the time values associated with every other device.

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- Although the Fietze reference measures the flow of each device through time, it is understood that speed (such as sheets/min or mm/sec) is simply another way of measuring the flow of paper through a processing device.
- Again, both references are in the art of finishing device management for a printing system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to improve Ueda's invention with the OAM and its ability to communicate to a plurality of finishing devices. The motivation would be to expand the number of finishing devices a printing device can communicate with to provide further functionality such as stapling, collating, etc. Also, this would enable various devices to operate at an optimal speed for maximum paper processing output.

III. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al (EPO Patent Application No. 0,571,194) in view of Fietze et al (U.S. Patent No. 6,241,404) and further in view of Platteter (U.S. Patent No. 5,629,775)

16. Claim 19

A method as recited in claim 18

- **wherein the second selected output speed matches an input speed of the third device.**

- Again, as mentioned, the Ueda et al reference does not disclose a third device.

The secondary reference, Fietze et al mentions timings, it does not explicitly disclose the synchronization of the devices to one another due to these timings. However, the third reference, Platteter, discloses in column 4, lines 21-26, that synchronization of devices “...includes timing adjustments such as altering the pitch or cycles of the attached device.” For example, the logic and circuitry 24B and 28B adjust to new timing information from SCB 22 to skip pitches or change timing cycles to maintain timing compatibility with the printer 10 and with one another.” This ability to skip pitches ensures that the output speeds of one device can be matched to the input speed of the another device processing the output of the one device.

- Since all three references are in the art of finishing device management, it would be obvious to one of ordinary skill in the art at the time of the invention to improve Ueda et al's invention further with additional devices that can synchronize themselves with one another. The motivation would be to allow ensure that a printing system with multiple finishing or processing devices can be appropriately synchronized to improves printing efficiency and to prevent errors such as jamming.

17. Claim 20

A method as recited in claim 18

- **further including the second device outputting media to the third device at the second selected output speed.**
- Platteter et al discloses in column 3, lines 21-23 that "[t]he devices are attached to each other such that sheets or sets of paper can be transferred from one device to another."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is 703-306-4142.

The examiner can normally be reached on M-F 8:00-4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 703-305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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